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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,701	11/04/2003	Nobuhiro Kihara	SON-2167/CON	5891

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EXAMINER

JUBA JR, JOHN

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,701

Applicant(s)

KIHARA ET AL.

Examiner

John Juba, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17 - 22 and 47 - 52 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 17, 18, 20, 47, 48 and 50 is/are rejected.
- 7) ☒ Claim(s) 19, 21, 22, 49, 51, and 52 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/906,672.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/4/2003
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Priority

Applicant's claim for foreign priority under 35 U.S.C. §119(a)-(d) is acknowledged. The certified copy has been filed in parent Application No. 09/906,672, filed on July 18, 2001. Applicants' claim for the benefit of earlier filing under § 120 is acknowledged. The specification contains a specific reference to the earlier nonprovisional application and sets forth "a relationship" with the earlier filed application, and this requirement is regarded as having been satisfied. However, the relationship is considered to be in error.

This application contains claims drawn to the third species of invention identified in the restriction requirement set forth in parent application serial number 09/906,672. Thus, the instant application is not a "continuation" application, but rather a "divisional" application. The two terms are mutually exclusive. See MPEP 201.11 III. A.

Appropriate correction is required.

Information Disclosure Statement

As a matter of course, all of the references cited during prosecution of parent application serial number 09/906,672 have been considered. These references are all cited on Applicants' I.D.S. of November 4, 2003.

Drawings

The replacement drawing sheets were received on November 4, 2003. These corrected drawings are approved by the examiner.

Specification

The disclosure is objected to because of the following informalities. Appropriate correction is required:

In the paragraph beginning on Page 6, line 1, the last sentence (as now amended) either lacks a verb, or lacks noun-verb agreement.

Claim Objections

Claims 17 – 22 and 47 – 52 are objected to because of the following informalities. Appropriate correction is required:

In claims 17 and 47, rather than suggesting that the image-reproducing apparatus “records” image data, “which records” (line 3) should read - - in which are recorded - - , - - which contains - - , or similarly. Claims 18 – 22 and 48 – 52 are objected to at least as inheriting this same informality through their various dependencies from claim 17 or 47.

Claims 20 and 50 lack antecedent basis for “the inner surface”.

Claims 21 and 51 lack antecedent basis for “ the light guiding section.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17, 18, 20, 47, 48, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (U.S. Patent number 5,341,230), in view of Gardner, et al (U.S. Patent number 5,698,906).

Referring *for example* to the discussion of Figure 1, Smith discloses an image-producing apparatus for reproducing an image from a "tell-tale" hologram (62A) which contains two- or three-dimensional image data related to vehicle status wherein

an optical member (52) having a prism (60) on a part of a front surface thereof is bonded (*via* PVA layer 66) at the rear surface thereof to the hologram (62A), and illumination light is applied to the prism in order to reproduce a two- or three-dimensional image from the hologram,

wherein the optical member (52) has an incident surface on the prism, and the illumination light is applied at a right angle to the incident surface of the optical member, and

wherein the illumination light is applied to the prism at a fixed angle (*i.e.*, the light is collimated).

Thus, Smith discloses the invention substantially as claimed. However, Smith does not disclose a plurality of parallel prisms, as recited.

In the same field of endeavor, Gardner, et al discloses discloses two- or three-dimensional image-producing hologram decals on the rear surface of an optical member having a plurality of light incident surfaces on a plurality of parallel prisms on a part of a rear surface of the optical member. Gardner, et al teach that even the simplest of vehicle status information, such as the status a door lock can be displayed boldly as two-spatially separated holograms illuminated via corresponding prisms.

It would have been obvious to one of ordinary skill in the art to employ plurality of holograms and a corresponding plurality of prisms in the system of Smith, in the interest of boldly displaying two alternate messages related to the status of a single vehicle parameter as suggested by Gardner, et al, or in the interest of displaying more than one of the separate messages contemplated by Smith (Col. 2, lines 35 – 38). In accordance with the teachings of Gardner, et al, the system of Smith displaying two messages would have comprised an optical member having [a plurality of] “parallel prisms on a part of a front surface” of the optical member (52), with illumination light “applied to the parallel prisms, in order to reproduce a [at least one] 2- or 3-dimensional image from the [at least one] hologram”.

With regard to claims 47, *et seq.*, use of the system of Smith in accordance to the teachings of Gardner, et al fairly suggests the method steps as recited.

With regard to claims 18, 20, 48, and 50, the presence of a light guiding section in basic design of Smith is evident by inspection. The modified design would have at least one light guiding section, since both Smith and Gardner, et al teach the use of a light guiding section in the optical member. Whether the “inner surface” of the optical

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member is to be construed as lying between the prism and the optical member or as being an internally reflective surface on the rear surface of the optical member, it appears from the basic geometry of Smith that the modified system would have a part behind the prism(s) that is exposed at the inner surface.

Claims 17 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wreede, et al, in view of Sibbald. Referring *for example* to Figure 14 and the associated text, Wreede, et al disclose an image-producing apparatus for reproducing an image from a hologram which contains two- or three-dimensional image data wherein

an optical member having a prism (29) on a part of a front surface thereof is bonded at the rear surface thereof to the hologram (55), and illumination light is applied to the prism in order to reproduce a two- or three-dimensional image from the hologram,

wherein the optical member has an incident surface on the prism, and the illumination light is applied at a right angle to the incident surface of the optical member, and

wherein the illumination light is applied to the prism at a fixed angle (*i.e.*, the light is collimated).

Thus, Wreede, et al disclose the invention substantially as claimed. However, Wreede, et al do not disclose a plurality of parallel prisms, as recited.

In the same field of endeavor, Sibbald disclose an optical element having a prism (24) on the front surface thereof (Fig. 2) for coupling light incident thereon to a point on the rear surface thereof at a desired angle. In Figure 3, Sibbald teaches the equivalence of the single large prism with a plurality of smaller, parallel prisms (44) for coupling light to the rear surface thereof at a particular angle. The reduction in overall bulk and cross-section of the apparatus is readily apparent.

It would have been obvious to one of ordinary skill to replace the single large prism of Wreede, et al with a plurality of smaller, parallel prisms, since such an arrangement was recognized in the art as being equivalently suited for this purpose. In the instant case, one of ordinary skill would have been motivated to selected the plurality of prisms over the single, larger prism, in the interest of producing a thinner, lighter-weight apparatus. Both Wreede, et al and Sibbald teach illumination along a surface normal of at least one prism and teach illumination light applied to the prism surfaces at a fixed angle.

Allowable Subject Matter

Claims 19, 21, 22, 49, 51, and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art, taken alone or in combination, fails to teach or to fairly suggest *in combination*,

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the apparatus or method wherein the light guiding section is tinted black at an outer surface, as recited in claims 19, 21, 49, and 51; or

the apparatus or method wherein the image-bearing hologram or holographic stereogram and optical member bonded thereto are bent in the form of a hollow cylinder, and light is incident on the inner surface of the cylinder and incident on the front surface of the optical member such that light is applied to light incident surfaces of the prisms at right angles and applied at the hologram interface at a fixed incidence angle thereby to reproduce the image, as variously recited in claims 22 and 52.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Juba whose telephone number is (571) 272-2314. The examiner can normally be reached on Mon.-Fri. 9 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Drew Dunn whose number is (571) 272-2312 and who can be reached on Mon.- Thu., 9 – 5.

The centralized fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for *all* communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2800.


JOHN JUBA, JR.
PRIMARY EXAMINER
Art Unit 2872

August 16, 2004